

### REMARKS

The Office Action of March 6, 2006 has been received and its contents carefully studied. All of the claims 1-2 and 4-15 have been rejected.

Regarding the drawings, item #10 of the Office Action Summary is ambiguous about whether the drawings are accepted. However, Applicant assumes that the drawings remain accepted, as indicated in the Office Action of March 22, 2005.

Claims 1-2 and 4-14 have been rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action notes that in claim 1 the limitation of "the quality" in line 6 lacks sufficient antecedent basis. This defect has now been fixed. Withdrawal of the rejection under 35 USC §112 is respectfully requested.

In response to the rejections, applicants have further amended independent claim 1 and also independent claim 15. These claims now explicitly recite determining, based on the estimated quality, an interval between data segments that are to be communicated in the data packet of a first segment format that includes a first amount of control data, the interval being a number of data segments between zero and infinity, the interval decreasing when the estimated quality decreases. Consequently, certain corresponding limitations of claim 2 have been deleted. The basis for the amendments can be found at least at the last paragraph on page 10 of the specification as filed.

The claims were also rejected under 35 USC §103(a) as being unpatentable over *Roper et al* (EP 0616455A2) and further in view of *Degermark et al* ("Low Loss TCP/IP Header Compression for Wireless Networks") for obviousness reasons. The Office Action has argued that *Roper* discloses that the segment size for a particular link may be selected on the basis of current network traffic. At no point does *Roper* disclose that segment size may be selected in dependence on the quality of the data path. Rather, *Roper* discloses choosing a segment size for a particular link if this would lead to an overall reduction in transmission time (see col. 8, lines 19-34).

The Office Action states that *Roper* fails to expressly disclose that the format of each data segment may be selected from one of a first segment format including a first amount of control data and a second segment format including a second amount of control data, the second amount being less than the first amount, and selecting the first

amount with increasing frequency when the estimated quality of the data packet increases. The Office Action argues that these features are provided by *Degermark*. However, Applicants respectfully submit that at no point does *Degermark* suggest either (i) sending data packets with an uncompressed header at a frequency determined in dependence on the quality of the data path over which the data is to be sent, or (ii) that it is advantageous to send data packets with an uncompressed header with increasing frequency as the estimated data path quality decreases.

In support of (i), it is noted that at section 3.3, *Degermark* suggests sending a packet with an uncompressed header at a fixed interval with all other packets having compressed headers. At section 3.2, *Degermark* suggests a compressed slow start mechanism in which the interval between packets being sent with full uncompressed headers increases with time until a steady state interval is reached. However, both the compression slot start and fixed interval mechanisms operate on predetermined parameters: the interval between packets with uncompressed headers is not determined in response to an estimated quality of the data path. There is no suggestion in *Degermark* that the interval between packets with uncompressed headers (having a larger amount of control information) may be determined in dependence on the quality of the data path.

In support of (ii), it is noted that at page 380, lines 1-8, *Degermark* states that header compression (i.e., less control data) will improve the quality of service over a wireless link with high bit error rates. This suggests that when the quality of a data packet decreases it is advantageous to decrease the amount of control data in each data segment; this runs entirely contrary to the teaching of the present invention, which suggests that it is advantageous to increase the amount of control data when the quality of the data packet decreases.


Applicants therefore submit that *Degermark* would not provide any motivation to the skilled person to modify *Roper* in order to arrive at the method and communication system of the present invention. It is respectfully suggested that claims 1 and 14 as amended are novel and inventive over the cited art.

Applicants have added dependent claim 16, which recites that the interval between data segments having a first segment format is a number of data segments between zero and infinity. These claims find basis at the last paragraph on page 10 of the

application. Applicants have added new independent claim 17 to a communication system. Applicants have also added a new independent claim 18 to a transmission apparatus, as well as two dependent claims 19-20. These claims find basis in the description of the originally filed application at pages 6 and 7, and in Fig. 1 of the application as filed. New independent claim 21 recites a computer program, which mirrors claim 1. The basis for embodying the present invention in software can be found at page 7, lines 3-5. No new matter has been added by the addition of these claims. It is respectfully submitted that the claims are now in condition for allowance, and withdrawal of the rejection under 35 USC §103(a) is respectfully requested.

The Office Action of March 6, 2006, having been obviated by amendment or shown to be inapplicable, withdrawal of the rejections is requested, and passage of claims 1-2 and 4-21 is earnestly solicited.

Respectfully submitted,



Andrew T. Hyman  
Attorney for the Applicant  
Registration No. 45,858

mbh  
July 6, 2006  
WARE, FRESSOLA, VAN DER SLUYS  
& ADOLPHSON LLP  
755 Main Street, PO Box 224  
Monroe CT 06468  
Tel: (203) 261-1234  
Fax: (203) 261-5676